

REMARKS/ARGUMENTS

The foregoing amendments in the specification and claims are of a formal nature, and do not add new matter.

Prior to the present amendment, Claims 28-47 were pending in this application and were rejected on various grounds. With this amendment, Claims 36-37 and 41-43 have been canceled without prejudice and Claims 28-35 and 38-39 have been amended to clarify what Applicants have always regarded as their invention. The amendments to the specification and claims are fully supported by the specification and claims as originally filed and do not constitute new matter. Support for the amendments to Claims 28-32 can be found in Example 149 at least on page 511-512 of the specification.

Claims 28-35, 38-40 and 44-47 are pending after entry of the instant amendment. Applicants expressly reserve the right to pursue any canceled matter in subsequent continuation, divisional or continuation-in-part applications.

1. Formal Matters

In response to the Examiner's assertion that references 1 and 2 in the Information Disclosure Statement filed on September 20, 2002, are not in proper format, Applicants file herewith, an Information Disclosure Statement listing each reference of the "Blast Search" separately and including authors/inventors, relevant accession numbers and publication dates. Applicants respectfully request that the listed information be considered by the Examiner and be made of record in the above-identified application.

2. Specification

The specification has been amended to remove embedded hyperlink and/or other form of browser-executable code.

Further, Applicants have amended the specification to clearly recite the conditions of the deposits made under the Budapest Treaty.

3. Claim Rejection - 35 U.S.C. § 112, first paragraph (Enablement)

Claims 28-32, 39-40 and 44-47 stand rejected under 35 USC § 112, first paragraph. In particular the Examiner asserts that "the specification, while being enabling for an isolated nucleic acid having 100% nucleic acid sequence identity to a nucleic acid encoding the polypeptide of SEQ ID NO:194 or the mature form thereof (or drawn to a nucleic acid encoding a polypeptide having the function of affecting glucose or FFA uptake by primary rat adipocytes), does not reasonably provide enablement for an isolated nucleic acid not identical to a nucleic acid encoding at least the mature form of SEQ ID NO:194 or a nucleic acid which encodes a polypeptide which does not have this activity." (see instant Office Action, page 5).

While not acquiescing in the propriety of this rejection, and solely in the interest of furthering prosecution, Applicants have amended Claims 28-32 to recite, "wherein the encoded polypeptide stimulates the uptake of glucose or FFA (free fatty acid) by adipocyte cells." Since the claimed genus is now characterized by a combination of structural and functional features, any person of skill would know how to make and use the invention without undue experimentation based on the general knowledge in the art at the time the invention was made. As the M.P.E.P. states, "The fact that experimentation may be complex does not necessarily make it undue, if the art typically engages in such experimentation" *In re Certain Limited-charge cell Culture Microcarriers*, 221 USPQ 1165, 1174 (Int'l Trade Comm'n 1983), *aff. sub nom.*, *Massachusetts Institute of Technology v A.B. Fortia*, 774 F.2d 1104, 227 USPQ 428 (Fed. Cir. 1985) M.P.E.P. 2164.01. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the present rejection.

4. Claim Rejection - 35 U.S.C. § 112, first paragraph (Written Description)

Claims 28-32, 39-40, and 44-47 are also rejected under 35 USC 112, first paragraph, for lack of written description. In particular, the Examiner asserts that the claims are drawn to a nucleic acid having at least 80%, 85%, 90%, 95%, or 99% nucleic acid sequence identity to a nucleic acid encoding a polypeptide of SEQ ID NO:194 or the extracellular domain thereof, but that they do not require that the polynucleotides possess any particular biological activity.

Without acquiescing to the Examiner's position, and solely in the interest of expediting prosecution in this case, Claims 28-32 (and, as a consequence, those claims dependent from the same) are amended to recite a functional limitation that the encoded polypeptide "stimulates the uptake of glucose or FFA (free fatty acid) by adipocyte cells." Accordingly, it is no longer true that the claims are drawn to a genus of polynucleotides defined by sequence identity alone. This biological activity, coupled with a well defined, and relatively high degree of sequence identity are believed to sufficiently define the claimed genus, such that one skilled in the art would readily recognize that the Applicants were in the possession of the invention claimed at the effective filing date of this application. The Examiner is therefore respectfully requested to reconsider and withdraw the present rejection.

5. Claim Rejection - 35 U.S.C. § 112, second paragraph

Claims 28-47 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner objects to the applicant's use of the terms "extracellular domain" and "lacking its associated signal peptide."

Applicants submit that the cancellation of Claims 36 and 37 renders the rejection of these claims moot.

Without acquiescing to the Examiner's position, and solely in the interest of expediting prosecution in this case, as amended, the terms "extracellular domain" and "extracellular domain ... lacking its associated signal peptide" are no longer present in Claims 28-33 (and, as a consequence, those claims dependent from the same). Hence, the rejection is believed to be moot, and should be withdrawn.

6. Claim Rejection - 35 U.S.C. § 102

Claims 28-37, 41-44 and 46 are rejected under 35 U.S.C. § 102(a) as being anticipated by Yousef *et al.* It appears to the Applicants that the Examiner bases his rejection of these claims

on his assertion that one of the nine "putative new genes" hypothesized to exist in Yousef *et al.* was *subsequently* shown to encode a polypeptide with 100% identity to SEQ ID NO: 194. Applicants respectfully submit that Yousef *et al.* itself does not disclose a polypeptide or nucleic acid sequences having sequence identity to SEQ ID NO:194 or 193. As the Examiner has further pointed out, "the precise polypeptide sequence and isolated complete protein is not taught by the reference." (See page 13 of the instant Office Action). Yousef *et al.* only discloses sequences of three "predicted" exons each having very little identity to the entire SEQ ID NO:194 sequence.

Applicants respectfully submit that a rejection under 35 U.S.C. § 102 can only be proper if the cited reference recites every element of the rejected claim. "For a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be shown in a single reference." See *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). MPEP §2131 further provides, "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference.' *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). 'The identical invention must be shown in as complete detail as contained in the ... claim.' *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)."

As discussed above, Yousef *et al.* does not disclose the claimed nucleic acid sequence or its encoded polypeptide sequence. Accordingly the claims are not anticipated by Yousef *et al.* Hence, the Examiner is respectfully requested to reconsider and withdraw the present rejection.

Claims 41-47 are rejected under 35 USC § 102(e) as being anticipated by Ni *et al.* (US Patent No. 6,566,498). In particular, the Examiner asserts that Ni *et al.* teach an isolated nucleic acids having a high degree of identity to SEQ ID NO:193. In particular, the Examiner asserts that that Ni *et al.* teach an isolated nucleic acid having "97.9%" identity over "about 500 base pairs."

Applicants submit that the cancellation of Claims 41-43 renders the rejection of these claims moot.

Further, Applicants respectfully submit that SEQ ID NO: 193 of present application comprises 1091 nucleotides. Accordingly, Ni *et al.* discloses a polynucleotide (SEQ ID NO:5) having only 70.0% sequence identity over the entire length of the presently claimed SEQ ID

NO:193. In addition, the encoded polypeptide of Ni *et al.* (SEQ ID NO:6) has only 62.5% sequence identity to SEQ ID NO:194. Claims 28-32 recite an isolated nucleic acid encoding a polypeptide having at least 80%, 85%, 90%, 95% and 99% sequence identity to the amino acid sequence of SEQ ID NO:194, respectively. Accordingly, Applicants respectfully submit that Claims 28-32 (and, as a consequence, those claims dependent from the same) are not anticipated by Ni *et al.* Hence, Applicants respectfully request the Examiner to reconsider and withdraw the present rejection.

Conclusion

All claims pending in the present application are believed to be in *prima facie* condition for allowance, and an early action to that effect is respectfully solicited.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. **08-1641** (Attorney's Docket No. **39780-2830 P1C51**). Please direct any calls in connection with this application to the undersigned at the number provided below.

Respectfully submitted,

Date: December 22, 2004

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